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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,437	07/11/2003	David W. Holmes	CING-118	3221

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EXAMINER

WOZNIAK, JAMES S

ART UNIT	PAPER NUMBER
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2626

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/21/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/617,437

Applicant(s)

HOLMES, DAVID W.

Examiner

James S. Wozniak

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. **Claims 7-30** are objected to because of the following informalities:

The claims are improperly numbered- claim 7 is missing and two claims are numbered "20".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claims 1-30** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-6 and 10-15 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. More specifically, in claims 1 and 10, it is not clear whether the logic or the processor communicates audible signals via a speaker. In other words, in the current claim, there is no structural relationship between the pairing information for the other wireless device and the processor and

the processor and the speaker. For the application of the prior art of record, the examiner has interpreted the audible signal conversion and communication to be performed by a processor connected to a speaker because logic would be incapable of rendering an audible signal on its own.

The dependent **claims 2-6 and 11-15** further limit independent claims 1 and 10, and thus, are also indefinite.

Claims 8-9 and 16-17 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. More specifically, in claims 8 and 16, it is not clear whether the logic or the processor converts and applies control signals. In other words, in the current claim, there is no structural relationship between microphone and the processor. For the application of the prior art of record, the examiner has interpreted the audible signal conversion and control signal application to be performed by a processor connected to a microphone because logic would be incapable of performing such processes on its own.

The dependent **claims 9 and 17** further limit independent claims 8 and 16, and thus, are also indefinite.

In **claims 18-30**, it is uncertain whether the applicant is seeking to claim a method or system. The preamble states that a method is being claimed, while the limitation headings in independent claims 18, 20, 23, 25, and 28 refer to system elements. If the applicant wishes to claim a system, an appropriate amendment to the preamble is suggested. If the applicant wishes to claim a method, an appropriate amendment to the body of the claim is suggested (*for example*,

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in claim 18, line 2: --converting pairing information for a second wireless device into audible signals at a first wireless device;--).

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. **Claims 1-17 and 28-30** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1 and 10 are drawn to a wireless device enabling the pairing of wireless devices by converting pairing information to audio. In order for a claimed invention to be considered statutory under 35 U.S.C. 101, it must be useful and accomplish a practical application. That is, it must produce a “useful, concrete and tangible result” (*State Street, 149 F.3d at >1373-74<, 47 USPQ2d at 1601-02*). Although the final result of Claims 1 and 10 appear to be such a tangible result (*audio played via a speaker*), Claims 1 and 10 only recite the intended result of a set of logic instructions, which a processor is not required to perform. Thus, since the claimed device logic only refers to its intended result and not a *processor that actively executes the logic* to produce an audible signal via a speaker, Claims 1 and 10 are directed to non-statutory subject matter.

The dependent **claims 2-6 and 11-15** further limit independent claims 1 and 10, and thus, are also directed to non-statutory subject matter. Also, claims 2-3 and 11-12 further contain intended logic results that are considered to be non-statutory for the above noted reasons.

Claims 8 and 16 are drawn to a wireless device enabling the pairing of wireless devices by converting microphone signals into control signals. In order for a claimed invention to be considered statutory under 35 U.S.C. 101, it must be useful and accomplish a practical application. That is, it must produce a “useful, concrete and tangible result” (*State Street, 149 F.3d at >1373-74<, 47 USPQ2d at 1601-02*). Claims 8 and 16 only recite the intended result of a set of logic instructions, which a processor is not required to perform. Also, the intended result is directed towards an abstract control signal in a processor and not a “useful, concrete, and tangible” output such as a control signal sent to a specific settings portion of a wireless device or a pairing message sent to a different wireless device. Thus, Claims 8 and 16 are drawn to non-statutory subject matter.

Dependent **claims 9 and 17** further limit independent claims 8 and 16, and thus, is also directed to non-statutory subject matter. Also, claims 9 and 17 further contain intended logic results that are considered to be non-statutory for the above noted reasons.

The broadest reasonable interpretation of **Claim 28** encompasses a human being (see the second and third limitations), and thus, is directed to non-statutory subject matter (*See MPEP 2105- “If the broadest reasonable interpretation of the claimed invention as a whole encompasses a human being, then a rejection under 35 U.S.C. 101 must be made indicating that the claimed invention is directed to nonstatutory subject matter.”*).

Dependent **claims 29-30** further limit independent claim 28, and thus, are also directed to non-statutory subject matter.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. **Claims 1-2, 5, 8, 18-19, 28, and 30** are rejected under 35 U.S.C. 102(b) as being anticipated by Thomas et al (*U.S. Patent Application Publication: 2002/0065663*).

With respect to **Claim 1**, Thomas recites:

Pairing information for the wireless device (*address of another device stored in a memory register, Paragraph 0020; and pairing message received from another device, Paragraph 0022*);

Pairing information for another wireless device (*address stored in a memory register to be sent to another device for establishing a link, Paragraph 0020*);

A processor (*Speech synthesis address generation processor Fig. 7, Element 13*);

A speaker (*Fig. 7, Element 13*); and

Logic which, when applied to the processor, converts the pairing information for the other wireless device to audible signals, and communicates the audible signals via the speaker (*reading and synthesizing a device address stored in a memory register, Paragraph 0020*).

With respect to **Claim 2**, Thomas further discloses:

Logic which, when applied to the processor, performs acts defined by the pairing information for the wireless device (*converting address data to speech using a vocabulary and receiving a pairing message from a second device, Paragraph 0020*).

With respect to **Claim 5**, Thomas further discloses:

A pairing code specific to the wireless device (*device-specific address, Paragraph 0020*).

With respect to **Claim 8**, Thomas recites:

A microphone (*Fig. 7, Element 14*);

A processor (*speech recognition processor, Paragraph 0022*); and

Logic which, when applied to the processor, converts signals produced by the microphone into control signals, and applies the control signals to effect pairing of the wireless device with another device (*converting a device address to a control signal to enable device pairing, Paragraph 0022*).

With respect to **Claim 18**, Thomas recites:

First wireless device converting pairing information for a second wireless device into audible signals and the first wireless device communicating the audible signals to the second wireless device (*speech synthesis of pairing information and speech output via a speaker, Paragraphs 0020 and 0030*);

The second wireless device converting the audible signals into control signals and the second wireless device applying the control signals to effect pairing with the first wireless device (*speech recognition of pairing data and control signal generation, Paragraphs 0022 and 0030*).

With respect to **Claim 19**, Thomas discloses the speech recognition processing as applied to Claim 18.

With respect to **Claim 28**, Thomas recites:

A first wireless device converting pairing information for a second wireless device into audible signals (*Paragraph 0020 and Fig. 1, Element 12*);

The first wireless device communicating the audible signals to a human (*Paragraph 0020 and Fig. 1, Element 13*);

The human providing inputs corresponding to the audible signals to the second wireless device (*Paragraph 0022 and Fig. 1, Element 5*);

The second wireless device converting the inputs into control signals (*Paragraph 0022 and Fig. 1, Element 15*); and

The second wireless device applying the control signals to effect pairing with the first wireless device (*Paragraph 0022*).

With respect to **Claim 30**, Thomas further discloses:

A pairing code specific to the wireless device (*device-specific address, Paragraph 0020*).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **Claims 3, 6, 9-12, 14-17, and 20-27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas et al in view of Haller et al (*U.S. Patent: 6,845,097*).

With respect to **Claims 3 and 9**, Thomas discloses the wireless device as applied to Claims 1 and 8 that receives a prompt for address generation, automatically outputs an audible address, and waits for a pairing message response from a second device (*Paragraphs 0020-0022*). Thomas does not specifically suggest that the output of an audio signal is synchronized with pairing information, however Haller discloses a process that periodically updates device pairing (*Col. 7, Lines 1-15*), which when combined with the teachings of Thomas, would yield synchronized audio output with every address retrieval step (*i.e., audio output provided at each update request*).

Thomas and Haller are analogous art because they are from a similar field of endeavor in device pairing systems utilizing speech recognition. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Thomas with the periodic updating of pairing information taught by Haller in order to enable subsequent automatic device pairing (*Haller, Col. 7, Lines 47-51*).

With respect to **Claim 6**, Thomas teaches the wireless device that establishes a connection with another wireless device through synthesized audio, as applied to Claim 1. Thomas does not teach that the audio information corresponds to DTMF tones, however, Haller recites device pairing codes in the form of DTMF tones (*Col. 6, Lines 22-37*).

Thomas and Haller are analogous art because they are from a similar field of endeavor in device pairing systems utilizing speech recognition. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Thomas with the use of DTMF tones taught by Haller in order to provide a well-known alternative

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command type to a voice command that is capable of accessing a device pairing message over a telephone network (*Haller, Col. 6, Lines 31-37*).

With respect to **Claim 10**, Thomas recites:

A processor (*Speech synthesis address generation processor Fig. 7, Element 13*);

A speaker (*Fig. 7, Element 13*); and

Logic which, when applied to the processor, converts the pairing information for the other wireless device to audible signals, and communicates the audible signals via the speaker (*reading and synthesizing a device address stored in a memory register, Paragraph 0020*).

Thomas does not specifically suggest that device information is sent to a network to affect device pairing, however Haller recites a network server that receives a PIN identifying another wireless device and sends a pairing message to a first wireless device (*Col. 6, Lines 22-37*).

Thomas and Haller are analogous art because they are from a similar field of endeavor in device pairing systems utilizing speech recognition. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Thomas with the network server taught by Haller in order to provide a means for confirming and authorizing device pairing (*Haller, Col. 7, Lines 35-37*).

With respect to **Claim 11**, Thomas further discloses:

Logic which, when applied to the processor, performs acts defined by the pairing information for the wireless device (*converting address data to speech using a vocabulary and receiving a pairing message from a second device, Paragraph 0020*).

Claim 12 contains subject matter similar to Claims 3 and 9, and thus, is rejected for the same reasons.

With respect to **Claim 14**, Thomas further discloses:

A pairing code specific to the wireless device (*device-specific address, Paragraph 0020*).

Claim 15 contains subject matter similar to Claim 6, and thus, is rejected for the same reasons.

With respect to **Claim 16**, Thomas recites:

A microphone (*Fig. 7, Element 14*);

A processor (*speech recognition processor, Paragraph 0022*); and

Logic which, when applied to the processor, converts signals produced by the microphone into control signals, and applies the control signals to effect pairing of the wireless device with another device (*converting a device address to a control signal to enable device pairing, Paragraph 0022*).

Thomas does not specifically suggest that speech signals are applied to a network to affect device pairing, however Haller recites a network server that receives a pairing request in the form of speech, recognizes the pairing request, and sends a pairing message to a wireless device (*Col. 6, Lines 22-37*).

Thomas and Haller are analogous art because they are from a similar field of endeavor in device pairing systems utilizing speech recognition. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Thomas with the network server taught by Haller in order to provide a means for confirming and authorizing device pairing (*Haller, Col. 7, Lines 35-37*).

Claim 17 contains subject matter similar to Claims 3 and 9, and thus, is rejected for the same reasons.

Claim 20 (the first claim 20) contains subject matter similar to Claims 3 and 9, and thus, is rejected for the same reasons.

Claim 20 (the second claim 20) contains subject matter similar to Claims 10 and 18, and thus, is rejected for the same reasons.

With respect to **Claim 21**, Thomas discloses the speech recognition processing as applied to Claim 18.

Claim 22 contains subject matter similar to Claims 3 and 9, and thus, is rejected for the same reasons.

Claim 23 contains subject matter similar to Claim 20 (the second claim 20), and thus, is rejected for the same reasons.

Claim 24 contains subject matter similar to Claims 3 and 9, and thus, is rejected for the same reasons.

Claim 25 contains subject matter similar to Claim 16, and thus, is rejected for the same reasons.

With respect to **Claim 26**, Thomas further recites a response message sent by a wireless device to affect device pairing (*Paragraph 0022*).

With respect to **Claim 27**, it would be obvious within the scope of the teachings of Thomas to incorporate speech synthesis/recognition capabilities in both devices to enable pairing initiation from either device (*Paragraphs 0020-0022 and Paragraph 0031*).

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10. **Claims 4 and 29** are rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas et al in view of Cannon et al (*U.S. Patent: 7,155,163*).

With respect to **Claims 4 and 29**, Thomas teaches the wireless device that establishes a connection with another wireless device through synthesized audio, as applied to Claims 1 and 28. Thomas does not specifically disclose device pairing codes common to a wireless device model, however Cannon discloses a pairing code common to a particular model of wireless device (*Col. 5, Lines 12-20*).

Thomas and Cannon are analogous art because they are from a similar field of endeavor in device pairing systems utilizing speech recognition. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Thomas with the pairing code taught by Cannon in order to enable multiple devices carrying the same code to be paired automatically (*Col. 5, Lines 12-20*).

11. **Claim 13** is rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas et al in view of Haller et al and further in view of Cannon et al.

With respect to **Claim 13**, Thomas in view of Haller teaches the wireless device that establishes a connection with another wireless device through synthesized audio, as applied to Claim 10. Thomas does not specifically disclose device pairing codes common to a wireless device model, however Cannon discloses a pairing code common to a particular model of wireless device (*Col. 5, Lines 12-20*).

Thomas, Haller, and Cannon are analogous art because they are from a similar field of endeavor in device pairing systems utilizing speech recognition. Thus, it would have been

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obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Thomas in view of Haller with the pairing code taught by Cannon in order to enable multiple devices carrying the same code to be paired automatically (*Col. 5, Lines 12-20*).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Hind et al (*U.S. Patent: 6,886,095*)- teaches a system for initializing links between wireless devices.

Khoo (*U.S. Patent: 6,867,965*)- discloses a method for device pairing.

Kindo et al (*U.S. Patent: 6,965,787*)- teaches a system that sends a device address to a speech recognition unit.

Makinen (*U.S. Patent Application Publication: 2003/0003892*)- teaches a speech recognizer used in combination with a Bluetooth link.

Muroya et al (*U.S. Patent Application Publication: 2004/0148404*)- teaches a device that connects electronic devices based on a speech recognition output.


13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Wozniak whose telephone number is (571) 272-7632. The examiner can normally be reached on M-Th, 7:30-5:00, F, 7:30-4, Off Alternate Fridays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached at (571) 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James S. Wozniak
3/15/2007


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